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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,139	12/14/2001	Jeffrey A. Bonja	OIC-PT014	8997

3624 7590 10/27/2003

VOLPE AND KOENIG, P.C.  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

EXAMINER

KIANNI, KAVEH C

ART UNIT PAPER NUMBER

2877

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/017,139

Applicant(s)

BONJA ET AL.

Examiner

Kevin C Kianni

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 7 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 3-6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 3 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious the relative pulse delay between each of the channels relative to a slowest channel is calculated and mapped in combination with the rest of the limitations of the base claim. Claims 4-6 depend to claim 3 and therefore they are also allowable.

Claim 8 is allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious wherein the calculated material length for removal is determined by the formula  $L_d = t_d * C/n_d$  in combination with the rest of the limitations of the base claim.

## **Claim Rejections - 35 USC § 103**

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takai et al. (Takai), (US 5,715,339).

Regarding claims 1, 2 and 7, Takai teaches a method to skew or deskew a plurality of optical channels in a multi-channel optical cable (shown in at least fig. 9; see col. 1, line 66-col. 2, line 12+, also col. 6, lines 57-67), comprising:  
determining an optical pulse transmission time in at least a first channel and a second channel of the multi-channel optical cable (see col. 6, lines 41-46, also col. 7, lines 20-23+);  
calculating a relative pulse delay between the first channel and the second channel of the multi-channel optical cable (see col. 7, lines 4-19+);  
adjusting the optical pulse transmission time by one of removing a calculated material length from one of the channels to one of skew or deskew the first channel relative to the second channel (see col. 6, lines 57-67, also col. 7, lines 51-56+; wherein removing a section of a waveguide is intended for deskewing the time delay of the transmitted optical signal(s), see col. 2, lines 4-12).

However, Takai does not specifically teach wherein the above adjustment of the optical pulse transmission time can also be achieved by serially optically connecting delay optics such as a optical waveguide with a selected/relative time/pulse delay to at

least one of the channels. Nevertheless, Takai states that in order to synchronize parallel multi-channel transmission signal, absolute time of the signal propagation time is controlled for securing simultaneous arrival of signals for different arrays; the signal propagation time for each of bundles of optical waveguides such as fiber arrays are regulated so as to be in regions predetermined for them (see col. 1, line 66-col. 2, line 21). Furthermore, in order to deskew the transmitted signal transmission delays (which are actually skewed), Takai removes excess delay generating portion of the optical waveguide(s) (col. 6, lines 57-67). Thus, it would have been obvious to a person of ordinary skill in the art when the invention was made to add a certain piece(s) of optical waveguide(s) to the certain length(s) of Takai's optical multi-channel waveguide(s) in order to skew or to cause delay in the output optical transmission line(s), since the resultant optical system would provide standardize different parts, having a high productivity, an easy maintenance, a good economic property and a high exchangeability (see col. 2, lines 13-24).

#### ***Citation of Relevant Prior Art***

4. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Richardson et al. 6377739 teaches Skew/deskewing of input signals using multi-source signal

Levi et al. 5768460 teaches Skew/deskewing of multi-channel waveguide ribbons

Green et al. 6574021

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Cohen Re. 36,471

Tur et al. 4768880

Schuss et al. 4164373

Fee et al. 5859939

Lagasse 6570688

Koren et al. 5861965

Green et al. 6574021

These references are cited herein to show the relevance of the methods taught within these references as prior art.

**Contact Information**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Cyrus Kianni whose telephone number is (703) 308-1216.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (703) 308-4881.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872-9306 (for formal communications intended for entry)

**or:**

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.



Kevin Cyrus Kianni  
Patent Examiner  
Group Art Unit 2877

October 16, 2003